

In Search of Innovation Excellence



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TARGET Process Lead
9 November 2011





| maintaining the data needed, and c including suggestions for reducing | lection of information is estimated to ompleting and reviewing the collect this burden, to Washington Headqu ald be aware that notwithstanding an OMB control number. | ion of information. Send comment arters Services, Directorate for Inf | s regarding this burden estimate ormation Operations and Reports | or any other aspect of to s, 1215 Jefferson Davis | his collection of information, Highway, Suite 1204, Arlington | |
|---|---|--|---|--|--|--|
| 1. REPORT DATE 2. REPORT TYPE 09 NOV 2011 Briefing | | | | 3. DATES COVERED 09-11-2011 | | |
| 4. TITLE AND SUBTITLE | | | | 5a. CONTRACT NUMBER | | |
| IN SEARCH OF INNOVATION EXCELLENCE TARDEC Gated Evaluation Track for Technology Development | | | | 5b. GRANT NUMBER | | |
| | | | | 5c. PROGRAM ELEMENT NUMBER | | |
| 6. AUTHOR(S) Heather Molitoris | | | | 5d. PROJECT NUMBER | | |
| | | | | 5e. TASK NUMBER | | |
| | | | | 5f. WORK UNIT | NUMBER | |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army TARDEC ,6501 E.11 Mile Rd, Warren, MI,48397-5000 | | | | 8. PERFORMING ORGANIZATION REPORT NUMBER #22371 | | |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army TARDEC, 6501 E.11 Mile Rd, Warren, MI, 48397-5000 | | | | 10. SPONSOR/MONITOR'S ACRONYM(S) TARDEC | | |
| | | | | 11. SPONSOR/M NUMBER(S) #22371 | IONITOR'S REPORT | |
| 12. DISTRIBUTION/AVAIL Approved for publ | ABILITY STATEMENT | on unlimited | | | | |
| 13. SUPPLEMENTARY NO Briefing to Stage-G | TES Sate Innovation Sun | nmit 2011 | | | | |
| 14. ABSTRACT NA | | | | | | |
| 15. SUBJECT TERMS | | | | | | |
| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON | |
| a. REPORT unclassified | b. ABSTRACT unclassified | c. THIS PAGE unclassified | Same as Report (SAR) | 13 | | |

Report Documentation Page

Form Approved OMB No. 0704-0188





- Tank Automotive Research, Development, Engineering Center (TARDEC) Overview
- TARDEC Collaboration
- TARDEC/3M Partnership
- TARDEC's Gated Evaluation Track (TARGET)

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Tank Automotive Research, Development, Engineering Center



- TARDEC's mission is to develop, integrate and sustain the right technology solutions for all manned and unmanned
 Department of Defense (DOD) ground systems and combat support systems to improve Current Force effectiveness and provide superior capabilities for the Future Force.
- TARDEC's vision is to be the recognized DOD leader for ground systems and combat support systems technology integration and system-of-systems engineering across the U.S. Army TACOM Life Cycle Management Command.



Strategic Goal - Become world/national leader in Robotics, Energy and Underbody Blast

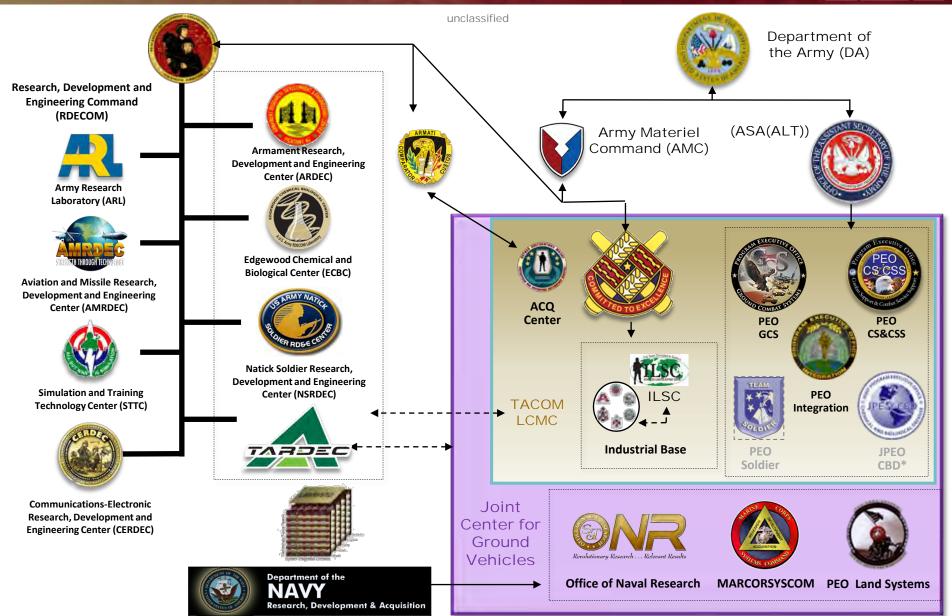
Lead. Innovate. Integrate. Deliver.



Unclassified

Ground Systems Enterprise







Unclassified Interface With Wider Community



Government







PEO Land Systems

Academia





Research Center

UNIVERSITY

Fastening and Joining Research Institute (FAJRI) at Oakland University







DOD-DOE AVPTA

Energy Initiative



Simulation Based **Reliability & Safety** (SimBRS)



Institute for Nano Soldier Technology

Industry

Geographic Benefits

- Connected to World-Class **Automotive Engineering** Universities at our doorstep
- · Defense Industry Ground Systems Hub
- Direct Linkage to World-Class **Automotive Research** and Development Centers
- Strategic Engagement with 1st, 2nd and 3rd Tier Automotive Supplier Network



Social Responsibilities

K-12



International





robotics RODEO

TARDEC exhibits our commitment to improving our communities in everything we do, from educational outreach to supporting local businesses



Designing in Innovation Excellence



Innovation occurs at the intersection of culture and business processes

- Processes drive efficiency
- Build in innovative practices within the gated system
 - Create a Learning environment
 - Allow easy of sharing of best practices
 - Ingrain Voice of Customer
 - Empower project leads





Developing Innovation

Unclassified



Culture of Innovation

Social Media

Culture of Best
Practice SharingCommunication with
the work force (Wiki
Sites, Process Flow
Diagrams)

Roles

Clearly Identified Value Chain of Customers and Stakeholders Vetwork

Technology Forums
and clubsInteraction among
work force (Hobbies
and educational)
create a Learning
Environment

TARDEC's implementation based on lessons learned from 3M

- Established Social Media capabilities (Wiki sites)
- Innovation Grants (Avenues to fund "Good Ideas")
- Networking Forums (Communities of Best Practice)

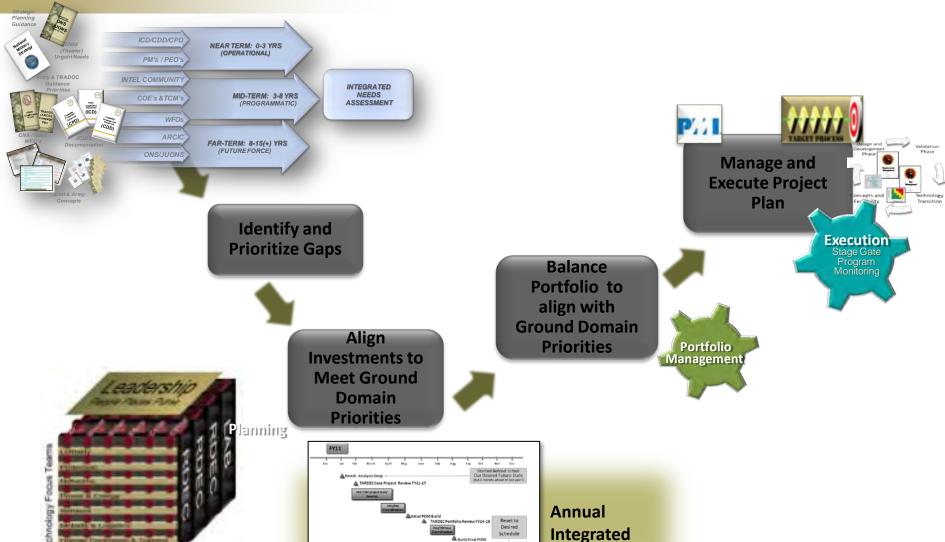


System Integration Domains

Science & Technology



Management



A TARDEC POM Approved

Planning Cycle



TARGET Science & Technology Gated System



Select Funding Path

Limited **Major Funding Spend Seed Money** (Internal Effort) Ideation & Gate Concepts & Gate Design & Gate Gate Technology Gate Validation Scoping Development Feasiblity Transition

Stage 1

High Level Objectives

- Alignment of Project with the big ARMY & TARDEC needs and strategy.
- •Understand the current technology landscape-current DoD Projects executing similar mission.

DELIVERABLE: PROJECT CHARTER

Stage 2

High Level Objectives

- •Establish Requirements Baseline
- •Identify Superior Concept and demonstrate technical feasibility
- •Complete TRA/MRA, establish project partners and determine in-house versus contracted Activities

DELIVERABLE: PROJECT PLAN Requirements Baseline

Stage 3

High Level Objectives

- •Develop a functional prototype that meets project performance objectives.
- Complete
 Manufacturing
 Assessment/
 Technology sensitivity
 assessment

DELIVERABLE:
Prototype
Manufacturing Req

Stage 4

High Level Objectives

- Validate performance against customer requirements.
- Define the operating range and the interface for technology technology.

DELIVERABLE: Validated Prototype Operations Report

Stage 5

High Level Objectives

- Package the technology
- Complete documentation of development.

DELIVERABLE: Technology Support to Transition



TARGET Maturity Model: Iterative Migration to Desired State

Horizon 3





Horizon 2

Pilot(s)

Horizon 1

- 50% Solution
- Few Projects
- Shell w/existing processes
- Introduce gating to management
- Specifics localized to those impacted

- Introduction of a standardized process
- 60% Solution
- Introduce Gating and Event Driven Project Management to Organization.
- Detailed Awareness throughout organization

- Standard Process Gen II
- Industry and DoD best practices integrated
- Data driven culture & fact based decision making promoted
- Awareness with customers and suppliers

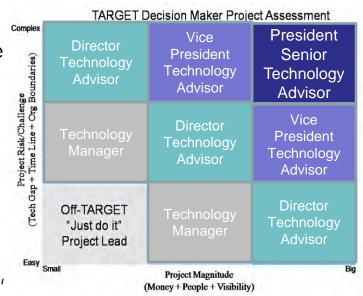
- Living Process
- 99% Solution
- Fact based/data driven in DNA of organization
- Expansion & integration with other Army & DoD efforts
- Customers and Suppliers understand and use the system.

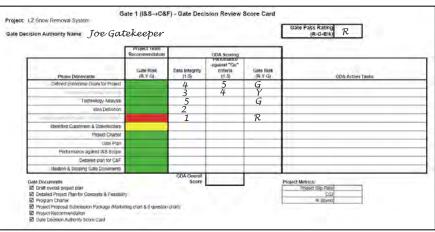


Gates



- Key <u>decision</u> points
 - Is the program healthy, valuable, & have a path forward?
 - Are adjustments needed?
 - Is this program still a top priority?
- Decisions driven by data
- Cross functional review committee reviewers are responsible, accountable, or supply resources
- Outputs
 - Approval status & priority status
 - Work plan for next phase
 - Bounding box for team
 - Resource commitment
 - Timeline to next gate





As the gates go, so goes the process – R. Cooper



Implementation Lessons Learned



- Don't underestimate the importance of middle management
- Tenacity is the key with respect to culture change
- Invest time in branding
- Spend time on selecting the Pilots



It's All About the Warfighter



